



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/568,355

08/16/2006

Andreas Gunther

2400.0200000/SRL

2719

26111

7590

12/04/2009

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.  
1100 NEW YORK AVENUE, N.W.  
WASHINGTON, DC 20005

EXAMINER

OH, TAYLOR V

ART UNIT

PAPER NUMBER

1625

MAIL DATE

DELIVERY MODE

12/04/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/568,355	<b>Applicant(s)</b> GUNTHER ET AL.	
	<b>Examiner</b> Taylor Victor Oh	<b>Art Unit</b> 1625	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 July 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

Art Unit: 1625

In view of the Declaration filed on 01/16/09 and the amendment filed on 7/27/09, the examiner has been withdrawn from the previous Office Action and decided to give another non-final office action.

**The Status of Claims :**

Claims 1-5 and 7-9 are pending.

Claims 1-5 and 7-9 are rejected.

**DETAILED ACTION**

1. Claims 1-5 and 7-9 are under consideration in this Office Action.

Priority

2. It is noted that this application is a 371 of PCT/EP04/09117 (08/13/2004), which has a foreign priority document, Germany 10337885.5 (08/18/2003), which is not in the file. .

Drawings

3. None.

***Claim Rejections - 35 USC § 103***

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any

Art Unit: 1625

evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-5 and 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thorsten et al (translated version of WO/0216304).

Thorsten et al discloses the followings (see abstract page ):

Art Unit: 1625

The invention relates to a novel, advantageous method for producing alpha fluoromalonic acid dialkyl esters of general formula (I) by reacting a compound of general formula (II) with an addition product of hydrogen fluoride and a trialkylamine, under pressure and at temperatures ranging from 103 DEG C to 130 DEG C. In formulae (I) and (2), R<1> represents alkoxy having 1 to 6 carbon atoms, R<2> represents hydrogen or fluorine, and R<3> represents hydrogen, fluorine or chlorine.; The invention relates to a novel, advantageous method for producing alpha fluoromalonic acid dialkyl esters of general formula (I) by reacting a compound of general formula (II) with an addition product of hydrogen fluoride and a trialkylamine, under pressure and at temperatures ranging from 103 DEG C to 130 DEG C. In formulae (I) and (2), R<1> represents alkoxy having 1 to 6 carbon atoms, R<2> represents hydrogen or fluorine, and R<3> represents hydrogen, fluorine or chlorine.



The reaction temperatures can be varied at the time of the execution of the procedure according to invention within a larger range. Generally one works at temperatures preferentially from 103 C to 130 C, preferably at temperatures from 104 C to 110 C, particularly at temperatures from 104 C to 107 C.

The procedure according to invention is accomplished generally under increased pressure (self-pressure). Generally one works at pressures from 1,3 to 9 bar, preferentially at pressures from 1,3 to 4 bar.

(see page 2 ,4<sup>th</sup> paragraph)

The procedure according to invention exhibits a set of advantages. Thus a fluor malonic acid dialkyl esters are already received after half of the response time, which is usual with well-known procedures. In the procedure according to invention the response time amounts to 12 hours during with well-known procedures 24 to 72 hours of response time is necessary (see. DE-A 42 37 892). A further advantage are the yields higher compared with conventional procedures around at least 15%. Therefore the new procedure is in particular suitable for industrial application well.

The Dicarbonylverbindungen of the general formula (II) and all other parent compounds are usual commercial products or can by simple procedures of these be made.

Used for the execution of the procedure according to invention generally accumulation products of hydrogen fluoride because of tri alkyl amines, which per mol tri alkyl amine 1 to 3 mole hydrogen fluoride contain, preferably is this relationship with 1: 1 to 2, particularly prefers with 1: 1.

(see page 1 , 9 and 11 paragraphs).

However, the instant invention differs from the prior art in that the claimed reaction pressure range is 1200 mbar which is slightly different from the prior art pressure.

With respect to the slight difference between the pressure in the reaction process,

Art Unit: 1625

the prior art process is conducted in the range of from 1.3 bar to 4 bar, whereas the claimed pressure range is from 800 mbar (0.8 bar) to 1200 mbar(1.2 bar ). The claimed ranges and the prior art do not overlap but are close enough that one skilled artisan in the art would have expected them to have the similar reaction conditions in the absence of an unexpected result. Therefore, it would have been obvious to the skilled artisan in the art to be motivated to optimize the prior process by controlling the pressure by routine experimentation.

Thorsten et al expressly teaches the method for preparing dialkyl alpha-fluoromalonates by reacting dialkyl chloromalonate with hydrogen fluoride and triethylamine at a temperature range from 103 to 130<sup>0</sup> C at a pressure of from 1.3 to 4 bar, which is similar to the claimed process. In spite of the slight pressure difference between the prior art and the claimed invention, the limitation of a process with respect to ranges of pH, time, temperature, and rate does not impart patentability to a process when such values are those which would be determined by one of ordinary skill in the art in achieving optimum operation of the process. The pressure in the process claim is well-understood by those of ordinary skill in the art to be a result-effective variable, especially when attempting to control the overall process. Therefore, it would have been obvious to the skilled artisan in the art to be motivated to optimize the Thorsten et al process by controlling the pressure by routine experimentation. This is because the skilled artisan in the art would expect such a process to be successful and manageable.

**Remarks:**

Concerning the Declaration filed on 01/16/09, applicants' arguments have little patentable weight over the recent office action based on the prior art

Art Unit: 1625

Thorsten et al (translated version of WO/0216304) unlike the previous office action heavily relied on prior art Bohm et al (US 5,391,811).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Taylor Victor Oh whose telephone number is 571-272-0689. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janet Andres can be reached on 571-272-0867. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Taylor Victor Oh, MSD,LAC  
Primary Examiner  
Art Unit: 1625

/Taylor Victor Oh/

Primary Examiner, Art Unit 1625

12/02/09